

Gene therapy with retroviral vectors

Fig. 1

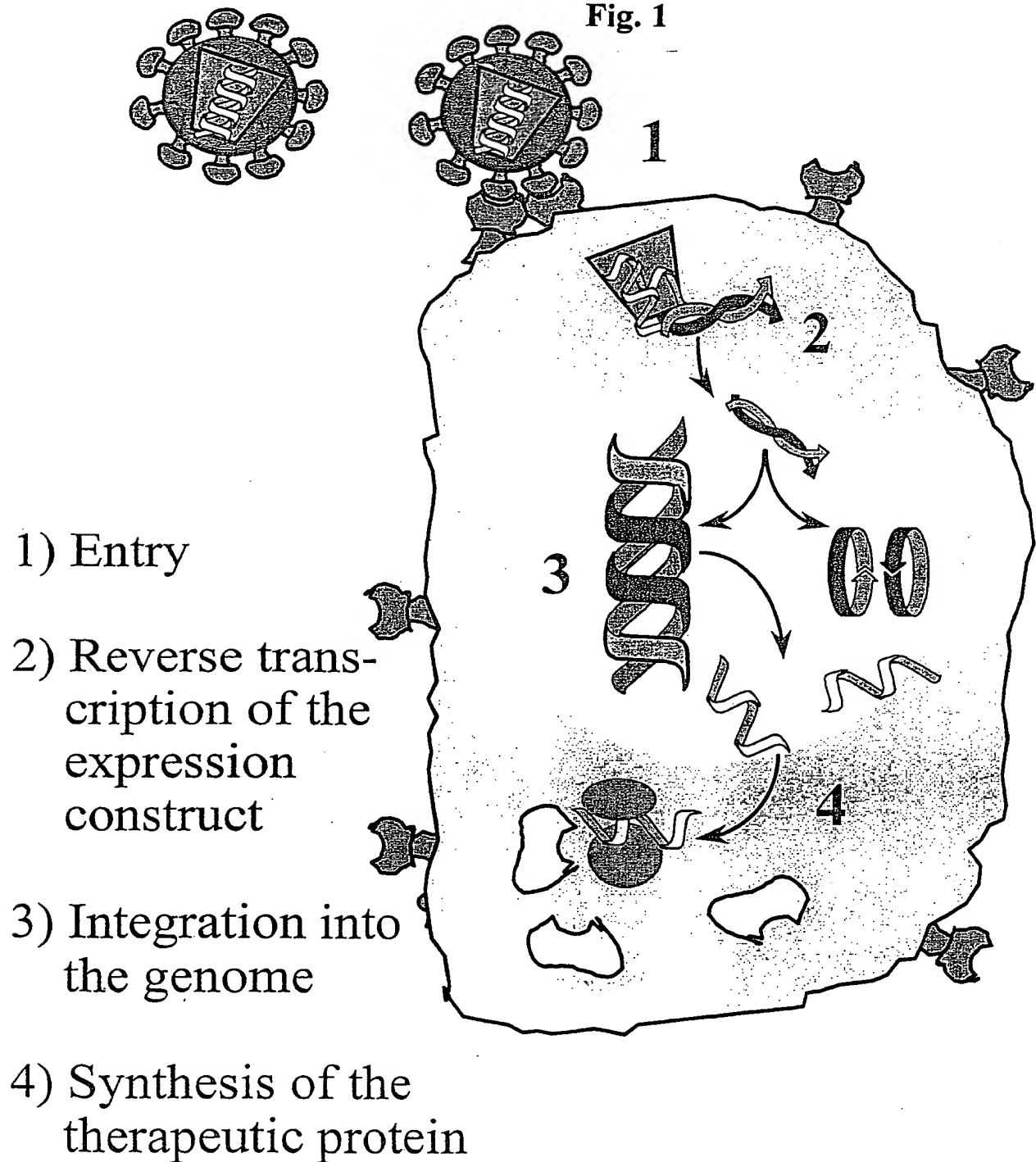


Fig. 2

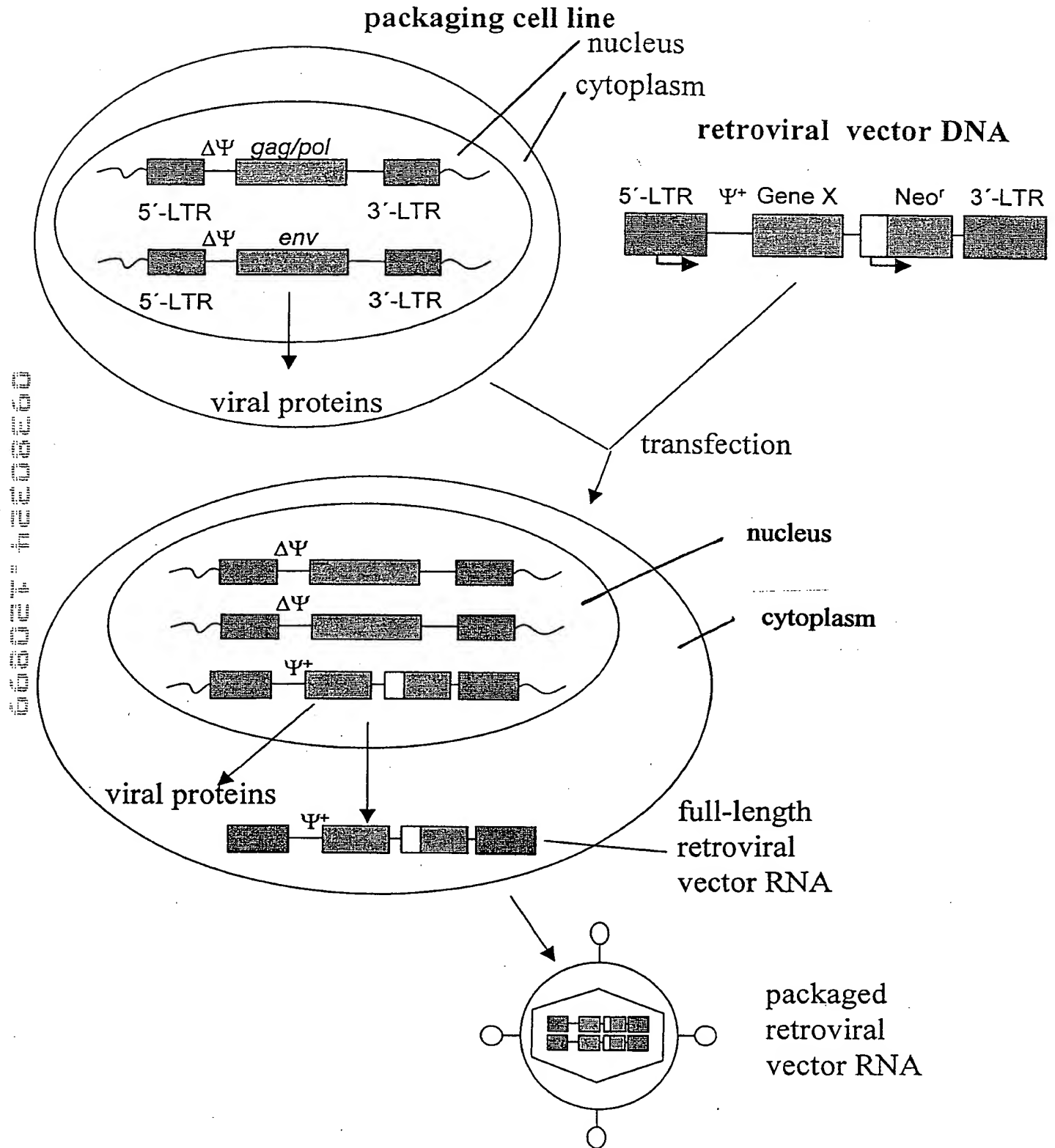


Fig. 3

Generation of retroviral vectors

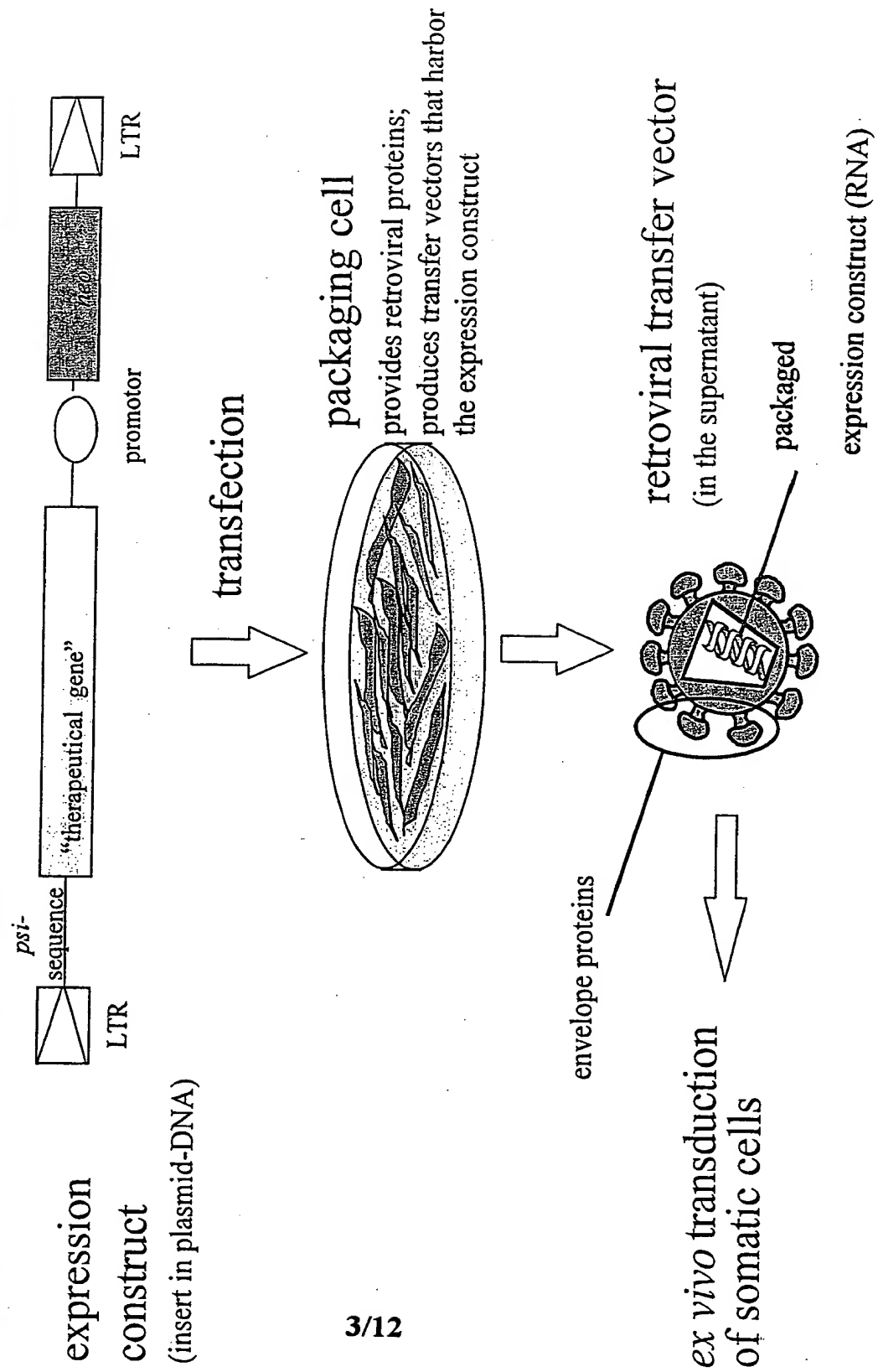


Fig. 4

retroviral packaging cell

+

env gene variant of HIV-1 expressing
a truncated transmembrane protein

e.g. TE671 cells: human medullablastom-cells

+

expression genes for *gag* and *pol* of MLV
that are not packaged



+

pMFGlnsLacZ
expression construct for *lacZ*
that is packaged



Δ gp41-TM

fusion-
peptide
membrane
region (TMR)



↑
stop codon instead of Aminosäure 712

Fig. 5 Assembly of retroviral vectors with foreign envelope proteins of HIV

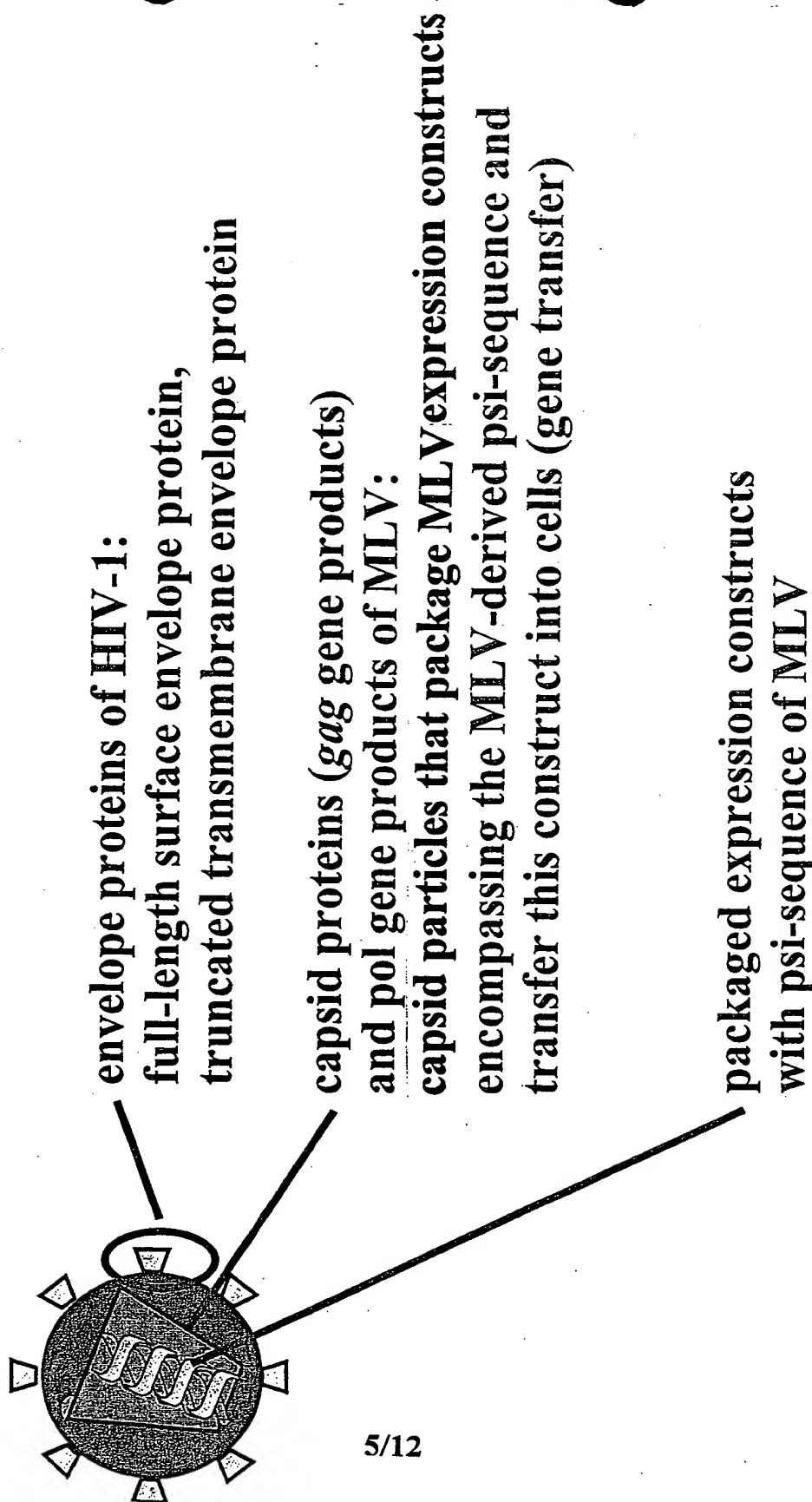


Fig. 6

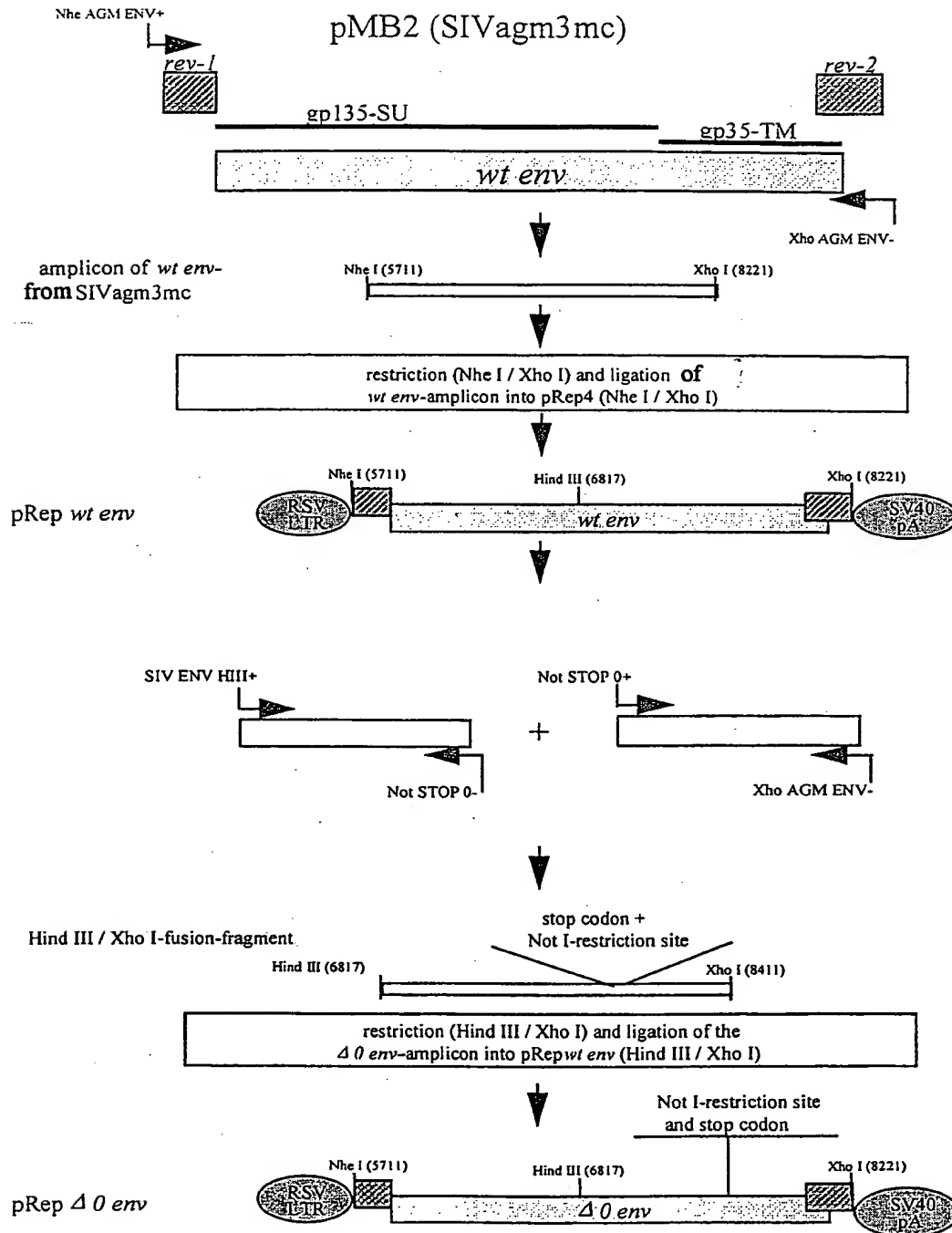


Fig. 7

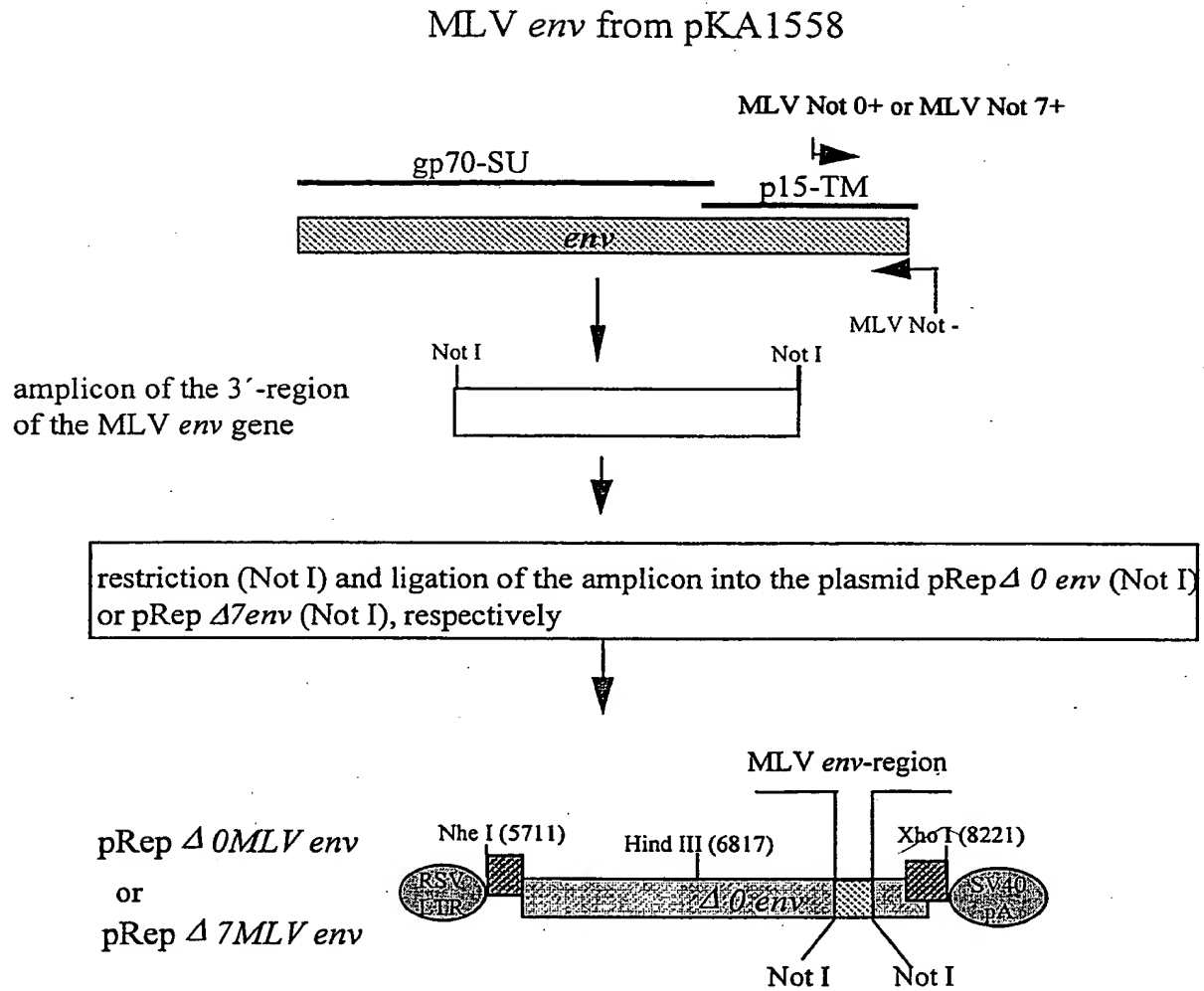


Fig. 8

Nhe AGM ENV+: Nhe I

5'-CTAGCTAGCATGCCCTAGGATCAGAAGAAAGAAG-3'

Xho AGM ENV-: Xho I

5'-CCGCTCGAGCTAATTAAGGATTCCTTCAAGGCC-3'

SIV ENV HIII+: Hind III

5'-CAAGGCTGAGACAAGCTTGGTGTCACTTCC-3'

Not STOP 0+: Not I

5'-GTTAGGCAGGGTTACGCGGCCGCTTAACCACAGATCCATATCCACCCG-3'

Not STOP 0-: Not I

5'-CGGGTGGATATGGATCTGTGGTTAAGCGGCCGCCTAACCCCTGCCTAACCC-3'

Not STOP 7+: Not I

5'-TACTCTCCTCTTTCTCGCGCCGCTAAATCCACCCGTGGAAGGGACAG-3'

Not STOP 7-: Not I

5'-TCCCTTCCACGGGTGGATTTAGCGGCCGCGGAGAAAGAGGAGAGTAACCCTGCC-3'

Not STOP 16+: Not I

5'-ATCCACCCGTGGAAGGGCGGCCGCTAAACGCAGAAGGGCC-3'

Not STOP 16-: Not I

5'-CCCTTCTGCGTTTTAGCGGCCGCCCTTCCACGGGTGGATATGG-3'

MLV Not 0+: Not I

5'-AAAAGGAAAAGCGGCCGCTCGATTAGTCCAATTTGTTAAAGACAGGATATCAGTGG-3'

MLV Not 7+: Not I

5'-AAAAGGAAAAGCGGCCGCGACAGGATATCAGTGGTCCAGGCTCTAGTTTTG-3'

MLV Not-: Not I

5'-AAAAGGAAAAGCGCGCCTATGGCTCGTACTCTATAGGCTTCAGCTGG-3'

Fig. 9

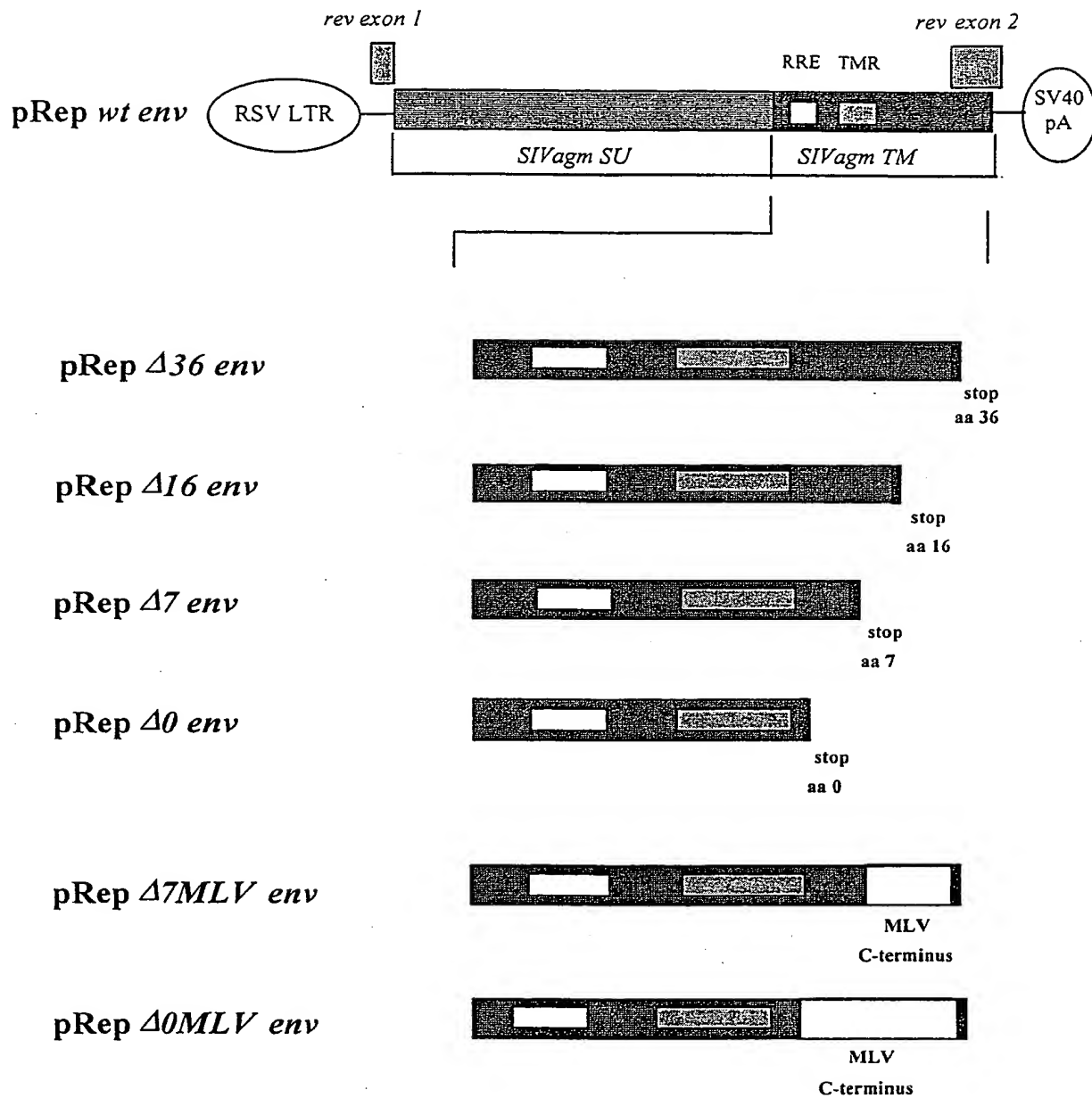
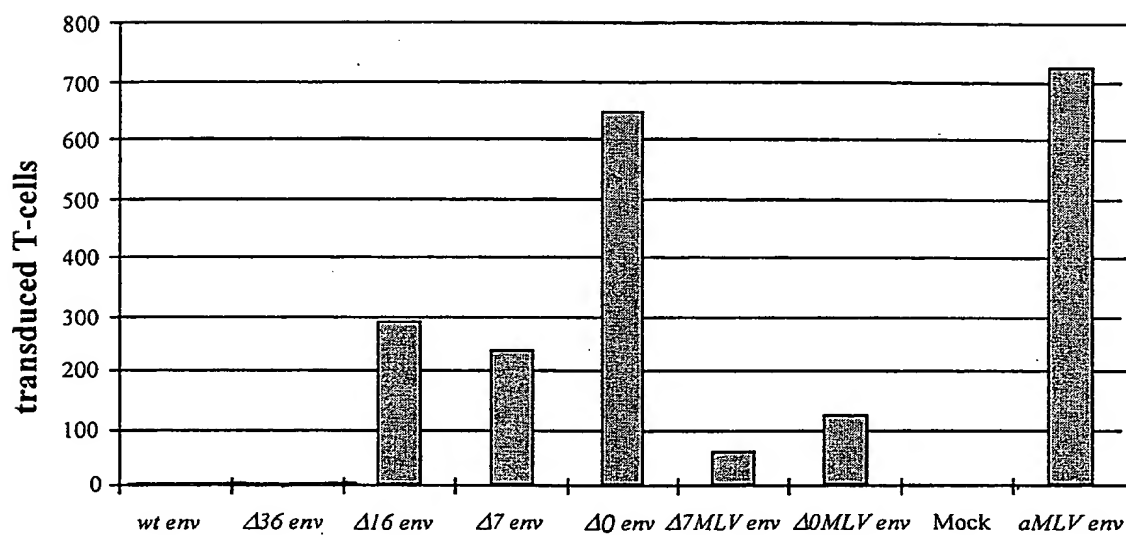


Fig. 10

	TMR of SIVagm3-TM	C-Terminus
SIVagm3 wt Env	VLGHIGLRLLYTVYSCIARVRQGY	SPLSPQIHIPWLGQPDNAE.....*
		135 aa
Δ36 Env	VLGHIGLRLLYTVYSCIARVRQGY	SPLSPQIHIPWLGQPDNAE.....*
		36 aa
Δ16 Env	VLGHIGLRLLYTVYSCIARVRQGY	SPLSPQIHIPWLGGR *
		16 aa
Δ7 Env	VLGHIGLRLLYTVYSCIARVRQGY	SPLSRGR *
		7 aa
Δ0 Env	VLGHIGLRLLYTVYSCIARVRQGY	AAA*
		3 aa
Δ7MLV Env	VLGHIGLRLLYTVYSCIARVRQGY	SPLSRGRN <u>RISVVQAL</u> *
		16 aa
Δ0MLV Env	VLGHIGLRLLYTVYSCIARVRQGY	AAARLVQFVKDRISVVQAL *
		19 aa
	TMR of MLV	C-Terminus
MLV wt Env	<u>SPWFTTLISTIMGPLIVLLMILFGPCILN</u>	<u>RLVQFVKDRISVVQAL*</u>
		16 aa

Fig. 11



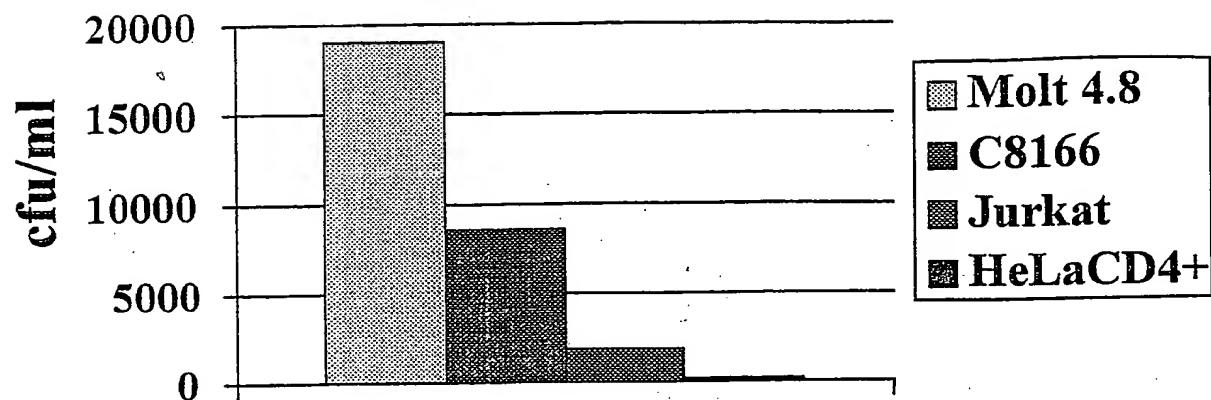


Fig. 12

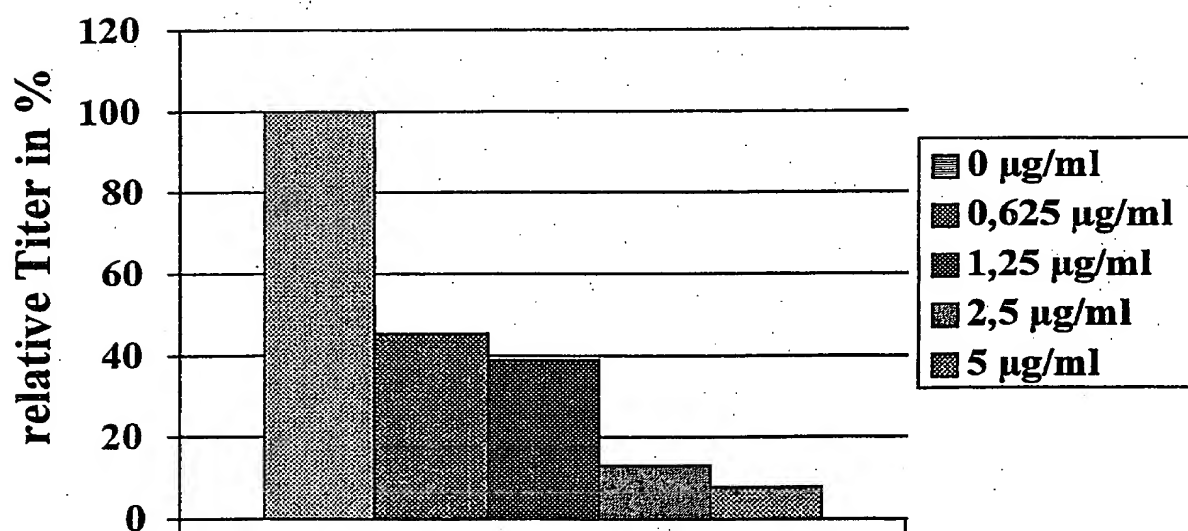


Fig. 13